

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88 - 153
NPDES PERMIT NO. CA0037699

WASTE DISCHARGE REQUIREMENTS FOR:

VALLEJO SANITATION AND FLOOD CONTROL DISTRICT,
SOLANO COUNTY

The California Regional Water Quality Control Board,
San Francisco Bay Region (hereinafter Board), finds that:

1. The Vallejo Sanitation and Flood Control District (hereinafter Discharger), submitted a report of waste discharge dated February 23, 1988, for reissuance of waste discharge requirements and a permit to discharge under the National Pollutant Discharge Elimination System (NPDES).
2. The Discharger presently discharges an annual average flow of 11.0 million gallons per day (mgd) from its secondary treatment plant which has a design capacity of 12.5 mgd. This plant treats domestic and industrial wastewater from the Vallejo area including Mare Island Naval Shipyard. The treated effluent is discharged into Carquinez Strait, a water of the State and of the United States, through a deep water outfall located west of the Carquinez Bridge, about 400 feet offshore of the Solano County shoreline, at a depth of about 75 feet below mean lower low water (Latitude 38 deg., 03 min., 53 sec.; Longitude 122 deg., 13 min., 42 sec.).
3. The Discharger recently completed construction of new biological secondary treatment facilities to replace the previous physical-chemical processes which were incapable of providing the required secondary level treatment. The new facilities were placed into operation in March, 1988 and the treatment plant is currently producing secondary treated effluent which meets waste discharge requirements.
4. The treatment process presently consists of initial screening, preaeration, primary sedimentation, biological treatment using trickling filters and short-term activated sludge, secondary clarification, chlorination and dechlorination. Treated effluent is pumped approximately 2.4 miles to the outfall in Carquinez Strait. Sludge is handled by lime stabilization, gravity thickening and vacuum filtration. Dewatered, stabilized sludge is hauled to an agricultural site on Tubbs Island in Sonoma County where it is incorporated into the soil. This land application for sludge disposal is regulated under a separate Permit.

5. The discharge is presently governed by Waste Discharge Requirements in Order No. 83-24, adopted by the Board on July 20, 1983, which allow discharge to Carquinez Strait.
6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains a listing of beneficial uses and water quality objectives for surface waters in the region, including the Carquinez Strait and contiguous waters. The Basin Plan prohibits discharges that do not receive a minimum initial dilution of 10:1 unless certain conditions are satisfied. The Basin Plan also contains a wet weather overflow policy which provides a conceptual framework for the control of such overflows in order to protect beneficial uses of receiving waters.
7. The beneficial uses of Carquinez Strait and adjacent waters identified in the Basin Plan include:
 - a. Contact and Non-Contact Water Recreation
 - b. Commercial and Sport Fishing
 - c. Navigation
 - d. Industrial Uses
 - e. Fish Spawning and Migration
 - f. Estuarine Habitat
 - g. Wildlife Habitat
 - h. Preservation of Rare and Endangered Species
8. The Discharger's collection system currently has insufficient capacity to handle peak wet weather flows. During storms of less than a one-half year return period, the collection system becomes surcharged and untreated, storm-water diluted, sewage overflows at various locations throughout the system. Overflows to receiving waters occur at the following four major locations: Coral Street, Ryder Street and Chestnut Street Overflow structures and from the Sears Point Pump Station Bypass structure. In an average winter, one to ten overflows occur at each of these locations. Overflows from the Sears Point Pump Station discharge to the Napa River, and from the other locations to Mare Island Strait.
9. The Discharger has completed a Sewer System Evaluation Survey which identified collection system deficiencies and recommended a program of cost-effective improvements to reduce excessive infiltration and inflow and to increase the collection system capacity in order to contain all flows resultant from a five-year return period design storm.
10. The Discharger has begun a nine-year Infiltration/Inflow Correction Program in order to implement the recommended cost-effective improvements. When these improvements are completed, surcharging and overflows of untreated wastewater from the collection system will be eliminated for flows up to the five-year design storm, which is approximately 60 mgd.

11. The treatment plant has a wet weather capacity of 30 mgd. Currently, peak wet weather flows exceed the treatment plant capacity and during these peak flows, untreated sewage is bypassed to Mare Island Strait through the Ryder Street Bypass pipe which is adjacent to the plant.
12. A Draft Wastewater Facilities Master Plan was prepared in 1987 which included an evaluation of the Discharger's existing and future wastewater system capacities and various alternatives to handle wet weather flows. As identified in the Draft Master Plan, and subsequently in the Wet Weather Treatment Facilities Project Report, the preferred, cost-effective alternative is to provide additional facilities to increase wet weather treatment capacity and construct a new outfall to Mare Island Strait for discharges during peak wet weather flows.
13. The Discharger plans to construct wet weather treatment facilities which will provide additional influent pumping, screening, grit removal, primary sedimentation, disinfection and effluent pumping facilities. When completed, these facilities will provide primary treatment and disinfection for peak wet weather flows up to the five-year design storm of about 60 mgd. Flows up to 30 mgd will continue to receive full secondary treatment. The Discharger has completed an Environmental Impact Report for this project, and construction designs have also recently been completed. The facilities are expected to be completed in 1991.
14. The existing discharge pipeline to the deep water outfall in Carquinez Strait has a limited hydraulic capacity of about 30 mgd. As part of the wet weather facility improvements, the Discharger plans to construct a new outfall to Mare Island Strait for the discharge of peak wet weather flows which exceed the capacity of the Carquinez Strait outfall. This wet weather outfall will be located in the vicinity of the existing Ryder Street Bypass pipe. Discharge will be through a submerged diffuser located about 200 feet offshore at a depth of about 8 feet below mean lower low water (Latitude: 38 deg., 5 min., 32 sec.; Longitude 122 deg., 14 min., 57 sec.).
15. The proposed wet weather outfall to Mare Island Strait will be used only when treatment plant flows exceed the Carquinez Strait outfall capacity, which is expected to occur an average of ten times per year. Discharge through this outfall will be done using a split flow operation, whereby only secondary treated, disinfected and dechlorinated effluent will be discharged into Mare Island Strait. When plant flows exceed 30 mgd, effluent flows will be routed so that only secondary effluent is discharged to Mare Island Strait, and a blend of secondary and primary treated effluents will be discharged through the Carquinez Strait outfall.

16. Discharges to Mare Island Strait will meet all secondary treatment effluent limitations. The blended discharges to Carquinez Strait are expected to meet weekly and monthly average effluent limitations, but may periodically exceed daily maximum BOD and Suspended Solids limitations.
17. The Discharger's proposed wet weather collection system and treatment facility improvements to handle wet weather flows and reduce wet weather overflows of untreated wastewater comply with the Basin Plan's conceptual approach for the control of wet weather overflows.
18. Design evaluations of the wet weather outfall found that, due to varying receiving water conditions, the discharge will not achieve a minimum initial dilution of 10:1 at all times, as required by the Basin Plan. The discharge is expected to achieve initial dilution of greater than 10:1 for 50 percent of the discharge time, but initial dilution may be on the order of 5:1 under some conditions. The Basin Plan states that an exception to the required minimum initial dilution of 10:1 will be considered for discharges where an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment and/or improved treatment reliability.
19. The proposed outfall to Mare Island Strait cannot be extended into the Strait to a depth where a 10:1 dilution would be assured due to constraints imposed by routine dredging of the navigational ship channel. The alternative to the proposed outfall which would achieve the required 10:1 dilution at all times would be to convey all flows to the existing deep water outfall in Carquinez Strait. This alternative would require the construction of a new forcemain and gravity line from the treatment plant to the Carquinez Strait outfall, parallel to the existing 2.4 mile discharge line, at an estimated present worth cost of \$2.2 million above the cost for the proposed wet weather facilities project.
20. The alternative to convey all flows to Carquinez Strait would provide the required 10:1 dilution but would likely provide only a minimal increase in environmental protection over the proposed project. The proposed discharges would consist only of secondary treated effluent and would only occur during periods of peak wet weather flow when urban runoff is at its greatest. As identified in the Wet Weather Treatment Facilities EIR, mass pollutant loadings to Mare Island Strait from urban runoff are significantly greater than mass pollutant loadings from the proposed treated wet weather discharges. In order to provide improved treatment reliability, the Discharger plans to provide emergency

stand-by power for the entire secondary treatment process, which will further assure that discharges to Mare Island Strait will at all times receive full secondary treatment.

21. Given the above considerations, an exception to the 10:1 dilution requirement is warranted for the proposed wet weather discharges to Mare Island Strait of secondary treated effluent during peak wet weather flows which are expected to occur about ten times per year, provided the proposed wet weather treatment and discharge facilities are designed, constructed and operated to assure high reliability.
22. The Discharger has implemented and is maintaining an Environmental Protection Agency (EPA) approved pretreatment program in accordance with Regional Board Order No. 84-60.
23. An Operation and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual should be kept updated to reflect significant changes in treatment facilities.
24. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.
25. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity for a public hearing and the opportunity to submit their written views and recommendations.
26. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Vallejo Sanitation and Flood Control District shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastewater at any point where it does not receive a minimum initial dilution of 10:1 is prohibited, except for secondary treated, chlorinated and dechlorinated wet weather effluent to Mare Island Strait of that portion of the treatment plant flow which exceeds the capacity of the Carquinez Strait outfall.

2. Discharges to Mare Island Strait of secondary treated, disinfected and dechlorinated effluent, during wet weather periods in excess of an average frequency of ten times per year is prohibited.
3. The bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from the collection system or pump stations tributary to the treatment plant, other than during peak wet weather flows in excess of the five-year design storm, as defined in the Discharger's Sewer System Evaluation Survey (January 1988), is prohibited.
4. The discharge of average dry weather flows greater than 12.5 million gallons per day is prohibited. Average dry weather flow shall be determined over three consecutive dry weather months each year.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
a. Biochemical Oxygen Demand (BOD ₅)	mg/l	30	45	60	--
b. Total Suspended Solids	mg/l	30	45	60	--
c. Settleable Matter	ml/l-hr	0.1	--	--	0.2
d. Oil and Grease	mg/l	10	--	20	--
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0

(1) Requirement defined as below the limit of detection in standard test methods.

2. The arithmetic mean of the biochemical oxygen demand (five-day, 20° C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).

3. a. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
- b. For discharges which receive a receiving water to wastewater initial dilution of less than 10:1, the pH of the discharge shall not exceed 8.5 nor be less than 6.5.
4. The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive effluent samples shall not exceed 240 MPN per 100 milliliters (240 MPN/100 ml). Any single sample shall not exceed 10,000 MPN/100 ml.
5. a. For discharges which receive a receiving water to wastewater initial dilution of at least 10:1, the survival of test fishes acceptable to the Board in 96-hour bioassays of the effluent shall be a 90 percentile value of not less than 50 percent survival, based on the ten most recent consecutive samples.
- b. For discharges which receive a receiving water to wastewater initial dilution of less than 10:1, the survival of test fishes acceptable to the Board in 96-hour bioassays of the effluent shall be a median of 90 percent survival and a 90 percentile value of not less than 70 percent survival, based on the ten most recent consecutive samples.
6. Representative samples of the effluent shall not exceed the following limits in micrograms per liter (ug/l): (1)

<u>Constituent</u>	<u>Daily Average</u> <u>Deep Water (2)</u>	<u>Daily Average</u> <u>Shallow Water (3)</u>
a. Arsenic	200	20
b. Cadmium	30	10
c. Chromium(VI) (4)	110	11
d. Copper	200	20
e. Lead	56	5.6
f. Mercury	1	1
g. Nickel	71	7.1
h. Silver	23	2.3
i. Zinc	580	58
j. Cyanide	25	25
k. Phenols	500	500
l. PAHs (5)	150	15

- (1) These limits are intended to be achieved through secondary treatment and pretreatment.
- (2) These limits apply for discharges which receive a receiving water to wastewater initial dilution of at least 10:1.

- (3) These limits apply for discharges which receive a receiving water to wastewater initial dilution of less than 10:1 (eg - discharges to Mare Island Strait).
- (4) The Discharger may at its option meet this limit as total chromium.
- (5) Polynuclear Aromatic Hydrocarbons (PAHs). This limit applies to the summation of the detected levels of the individual constituent PAHs as identified by EPA Method 610 (i.e. Total PAHs). If a discharge exceeds this limit, the concentrations of individual constituents shall be reported.

C. Receiving Water Limitations

- 1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
- 2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved Oxygen 5.0 mg/l, minimum.

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentrations than those specified above, then the discharge shall not cause further reduction in the ambient concentration of dissolved oxygen.
 - b. Dissolved Sulfide 0.1 mg/l, maximum.

c. pH Variation from normal ambient pH by more than 0.5 pH units.

d. Un-ionized Ammonia 0.025 mg/l as N, annual median;
0.16 mg/l as N, maximum.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 83-24. Order No. 83-24 is hereby rescinded.
2. Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

(Mass Emission Limit in lbs/day) = (Concentration Limit in mg/l) x (8.34) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies).

3. a. Compliance with Effluent Limitation B.5.a. shall be determined using two test species in parallel flow-through effluent bioassays which use undiluted effluent. One test specie shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow. The Discharger shall demonstrate compliance with Effluent Limitation B.5.a. using flow-through effluent bioassays by December 1, 1988.
- b. Compliance with Effluent Limitation B.5.b. shall be determined using two test species in parallel static renewal bioassays, using grab samples representative of the discharged effluent. One test specie shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow.
4. In reviewing compliance with Effluent Limitations B.1.a. and B.1.b. for Daily Maximum Limits, and B.2. of this Order, the Board will take special note of difficulties encountered in achieving compliance during wet weather periods when ordinary treatment capabilities are impeded by peak flows and storm-water diluted influent.

5. The Discharger shall achieve full compliance with Prohibitions A.1., A.2., and A.3. of this Order for wet weather flows by completing the proposed Wet Weather Treatment Facilities and the current Infiltration/Inflow Corrections Program improvements in accord with the following time schedule:

<u>Task</u>	<u>Completion Date</u>
a. Complete Construction of the Wet Weather Treatment Facilities	December 15, 1991
b. Complete Infiltration/Inflow Corrections Program improvements	December 15, 1996
c. Submit monthly summary of current improvement projects and progress toward completion of the above tasks (this information may be submitted as part of the regular monthly Self-Monitoring Report).	Fifteenth of each month.

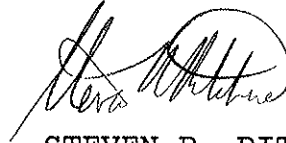
For Tasks a. and b., the Discharger shall submit to the Board, on or before the completion date, a report describing the status of compliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, as well as an estimate of the date when the Discharger will be in compliance.

6. Violations of Prohibitions A.1., A.2. and A.3. of this Order which occur as a result of wet weather flows prior to completion of the collection system and treatment facility improvement projects identified above shall be evaluated by the Board on a case by case basis, taking into account the degree of progress being made by the Discharger toward satisfactory completion of these improvements.
7. In order to improve the overall reliability of the treatment process, especially during wet weather conditions, the Discharger shall provide emergency stand-by power for all treatment units necessary to provide full secondary treatment, including chlorination and dechlorination.
8. The Discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year.
9. The Discharger shall review and update by December 31, annually, its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to

develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

10. The Discharger shall implement and enforce its approved pretreatment program in accordance with Regional Board Order No. 84-60 and its amendments thereafter. The Discharger's responsibilities include, but are not limited to, the following:
 - a. Enforcement of National Pretreatment Standards (e.g., prohibited discharges, Categorical Standards, local limits) in accordance with 40 CFR 403.5 and Section 307(b) and (c) of the Clean Water Act.
 - b. Implementation of the pretreatment program in accordance with the legal authorities, policies, procedures, and financial provisions described in the General Pretreatment Regulations (40 CFR 403) and the Discharger's approved pretreatment program including subsequent modifications to the program.
 - c. Submission of annual and quarterly reports to the EPA and to the State as described in Regional Board Order No. 84-60 and its amendments thereafter.
11. The Discharger shall comply with all sections of this Order immediately upon adoption.
12. The Discharger shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer.
13. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.
14. This Order expires October 19, 1993. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
15. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on October 19, 1988.

A handwritten signature in black ink, appearing to read 'Steven R. Ritchie', enclosed within a circular stamp or seal.

STEVEN R. RITCHIE
Executive Officer

Attachments:

Standard Provisions and Reporting
Requirements, December 1986
Self-Monitoring Program
Resolution No. 74-10
Order No. 84-60

[File No. 2129.2012]
[Originator/BDA]
[Reviewer/RJC]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

VALLEJO SANITATION AND FLOOD CONTROL DISTRICT

SOLANO COUNTY

NPDES NO. CA0037699

ORDER NO. 88 - 153

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall to Carquinez Strait from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present (May be the same as E-001-D).
E-001-D	At any point in the outfall at which point adequate contact with the disinfectant is assured and the waste has been dechlorinated.
E-002	At any point in the Ryder Street Wet Weather Bypass outfall to Mare Island Strait from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in Carquinez Strait located directly above the center of the discharge diffuser.
C-2	At a point in Carquinez Strait located 200 feet upstream from the center of the discharge diffuser.

- | | |
|-----|---|
| C-3 | At a point in Carquinez Strait located 200 feet downstream from the center of the discharge diffuser. |
| C-R | At a point in Carquinez Strait located 2000 feet upstream from the center of the discharge diffuser. |

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	Points located at the corners and at equidistant intervals not to exceed 500 feet along the perimeter (fenceline) of the wastewater treatment facilities.

NOTE: A sketch showing the locations of these stations shall accompany each monthly report.

E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
O-1 through O-'n'	At points in the collection system including manholes, pump stations, or wet weather overflow structures where overflows or bypasses occur.

NOTE: A map and description of each known overflow or bypass location shall accompany the Annual report for each calendar year.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

The schedule of sampling, measurements and analysis shall be that given as Table I.

III. MODIFICATIONS TO PART A

Paragraph C.5. of Part A is revised to read:

Average weekly and average monthly values are calculated as the sum of all daily discharge values measured during the specified period (calendar week or calendar month), divided by the number of daily discharge values measured during that specified period.

IV. REPORTING REQUIREMENTS

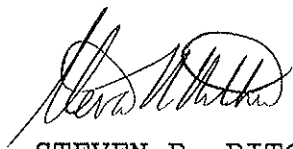
- A. Self-Monitoring Reports for each calendar month shall be submitted monthly, to be received no later than the fifteenth day of the following month. The required contents of these reports are specified in section G.4. of Part A.
- B. An annual report covering the previous calendar year shall be submitted to the Regional Board by January 30 of each year. The required contents of the annual report are specified in section G.5. of Part A.
- C. Any overflow, bypass or significant non-compliance incident that may endanger health or the environment shall be reported according to sections G.1 and G.2. of Part A.

V. SPECIAL STUDIES

In order to evaluate the potential impacts of wet weather discharges to resident and migratory fish in the vicinity of the Mare Island Strait wet weather outfall, a special study which would be developed in consultation with the Department of Fish and Game may be required.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 88 - 153.
- 2. Is effective on the date shown below.
- 3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.



STEVEN R. RITCHIE,
Executive Officer

Effective Date

10/19/88

Attachment:

Table I with footnotes

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1,2,3)

Sampling Station	A-001		E-001		E-001-D		E-002 (4)			All C Stas	All P Stas	All O Stas	
TYPE OF SAMPLE	C-24	Cont	G	C-24	Cont	G	Cont	G	C-X	Cont	G&O	O	O
Flow Rate (mgd)		D			D					D			E
BOD, 5-day, 20 °C, or COD (mg/l & kg/day)	5/W			5/W					D				
Chlorine Residual & Dos- age (mg/l & kg/day) (5)						H -	or Cont	H -	or	Cont			
Settleable Matter (ml/l-hr. & cu. ft./day)			D					D					
Total Suspended Matter (mg/l & kg/day)	5/W			5/W					D				
Oil and Grease (mg/l & kg/day)	2W (3)		2W (3)					D (3)					
Coliform (Total or Fecal) (MPN/100 ml) per req't						5/W		D					
Fish Tox'y 96-hr. & Surv'l in undiluted waste							M (6)	M					
Ammonia Nitrogen (mg/l & kg/day)						D (7)					M		
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (NTU or JTU)											M		
pH (units)			D			D (7)		D			M		
Dissolved Oxygen (mg/l and % Saturation)			D			D (7)		D			M		
Temperature (°C)			D			D (7)		D			M		
Apparent Color (Visual Observation)											M		
Secchi Disc (inches)													
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)			D					D			M		
Arsenic (mg/l & kg/day)				M					M				
Cadmium (mg/l & kg/day)				M					M				
Chromium, Total (mg/l & kg/day)				M					M				
Copper (mg/l & kg/day)				M					M				
Cyanide (mg/l & kg/day)				M					M				
Silver (mg/l & kg/day)				M					M				
Lead (mg/l & kg/day)				M					M				

TABLE 1 (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1,2,3)

Sampling Station	A-001		E-001			E-001-D		E-002 (4)			All C Stas.	All P Stas.	All O Stas.
TYPE OF SAMPLE	C-24	Cont	G	C-24	Cont	G	Cont	G	C-X	Cont	G&O	O	O
Mercury (mg/l & kg/day)				M					M				
Nickel (mg/l & kg/day)				M					M				
Selenium (mg/l & kg/day)				M					M				
Zinc (mg/l & kg/day)				M					M				
Phenolic Compounds (mg/l & kg/day)				M					M				
Polynuclear Aromatic (8) Hydrocarbons (mg/l & kg/day)				M ⁽⁸⁾					M ⁽⁸⁾				
All Applicable Standard Observations			D					D			M	W	E
Unionized Ammonia (mg/l as N)						D ⁽⁷⁾					M		

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours
(used when discharge does not
continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and
once in September
Q = quarterly, once in
March, June, Sept.
and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

TABLE I FOOTNOTES

- (1) If any sample is in violation of limits, sampling frequency shall be increased for the parameter until compliance is demonstrated in two successive samples.
- (2) During any time when bypassing occurs from any treatment unit(s) such that all wastewater does not receive full secondary treatment, the monitoring program for effluent discharged from the treatment plant shall include the following sampling and analyses:
 - a. Composite sample of the discharge on an hourly basis for the duration of the bypass event, for BOD and Total Suspended Solids analyses.
 - b. Grab samples of the discharge on at least a daily basis for Total Coliform, Settleable Matter and Oil & Grease analyses.
 - c. Continuous monitoring or hourly grab samples for Chlorine Residual measurement.
 - d. Continuous monitoring of flow.
- (3) Oil and Grease sampling shall consist of three (3) grab samples taken at equal intervals during the sampling day, with each grab sample being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each grab sample, within an accuracy of plus or minus five percent (5%). Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.
- (4) The sampling and analyses indicated for Station E-002 shall be conducted during any time when discharge through the Ryder Street Wet Weather Bypass outfall occurs, in accord with the following:
 - a. Composite sampling shall be conducted on an hourly basis for the duration of the discharge.
 - b. If the discharge continues for more than 24 consecutive hours, composite sampling shall be restarted so that any one composite sample does not exceed a 24-hour composite.
 - c. Grab samples for Chlorine Residual, Total Coliform and Fish Toxicity Bioassay measurements shall be taken from a point in the outfall at which adequate contact with the disinfectant is assured and the wastewater has been dechlorinated.

- d. Analysis for Fish Toxicity using static renewal bioassays as specified in Provision D.3.b. is required for only one discharge event per calendar month.
 - e. A composite sample not to exceed a 24-hour composite shall be analyzed for the indicated metals, cyanide, phenolic compounds and PAHs. Analysis for these parameters is required for only one discharge event per calendar month. These analyses may serve as the monthly analyses required for these parameters for station E-001, if the E-002 composite sample collected is a 24-hour composite.
- (5) Dosage for Chlorine shall be reported daily as total pounds (lbs) or total kilograms (kgs) during the previous 24 hours. Concentrations at the head end of the chlorine contact chamber and immediately prior to dechlorination shall also be reported.
 - (6) Flow-through effluent bioassays shall be performed using two test species in parallel flow-through tests using undiluted, disinfected and dechlorinated effluent. One test species shall be three-spined stickleback, and the other shall be either rainbow trout or fathead minnow.
 - (7) These parameters shall be tested for on the sample stream used for the flow-through bioassays, beginning at the start of the bioassay and then daily for the duration of the bioassay test (i.e. at 0, 24, 48, 72, and 96 hours from the start of the bioassay test).
 - (8) Polynuclear Aromatic Hydrocarbons (PAHs), as identified by EPA Method 610. If a discharge sample exceeds the effluent limitation for PAHs (Effluent Limitation B.6.1.), the concentrations of the individual constituent PAHs shall be reported.